

Petworth Monitor Farm meeting report

Meeting 5: Summer Event – Past, Present & Future

Date: 6th June 2019

Location: Medhone Barn, Blackhouse Lane, Petworth GU28 9NZ

For more information, visit: cereals.ahdb.org.uk/petworth



Key Messages

- Have a rotation plan, but be prepared to change.
- Understand the pest lifecycles
- There is no single solution to weed, pest and disease control; you have to have diversity in cropping and within cropping to disrupt lifecycles and build beneficials.
- Think about the field, the farm and the landscape
- Integrated pest management (IPM) is *“the use of all available plant protection methods, the integration of appropriate measures to discourage the development of weed, pest and disease populations, keeping the use of pesticides and other interventions to levels that are economically justified, and minimising the risks to human health and the environment.”*

OSR – CSFB Control

- Drilling early can increase the ability of the crop to tolerate adult damage, because the crop will be better established by the time migration begins
- Late drilling (into September) is likely to result in lower larval pressure and possibly avoid adult damage.
- Increasing seed rates for establishment may help when drilling in dry conditions however, this may also escape CSFB larvae
- Leaving volunteer OSR until late September can help to act as trap crop to attract migrating CSFB away from drilled OSR.
- CSFB is attacked by parasitoids in both larvae and adult form;- Species from the Ichneumonidae, & Braconid family of parasitoid wasps are known to be predators and can be encouraged through flower margins that include flowers from the **Umbelliferae** family and, also, including fallows within your greening or ES schemes.
- Defoliation of OSR using a topper and/or sheep before stem extension can also help control CSFB larvae but care must be taken when grazing livestock due to sulphur levels so don't use pregnant ewes or stock requiring high DLWG's. Introduce livestock to OSR over a period of time making sure they have adequate fibre (straw) water and minerals.



Biostimulants

- The term biostimulant is relevantly new and was a term first used in horticulture for substances other than crop nutrients, fertilizer's, soil improvers or pesticides
- The use of biostimulants MAY offer some level of improved control against folia diseases and, an increase in nutrient use efficiency so reducing reliance on high fertiliser and chemical inputs
- Biostimulants in the UK to date haven't be proven so jury still out with much more research and data required

ASSIST Experiment

The Challenge:

- Ensuring future food security without causing unacceptable environmental damage is one of the greatest challenges facing humanity
- UK State of Nature 2016 report reveals over half (56%) of UK species studied have declined since 1970; ongoing changes in agricultural practices are having the single biggest impact on nature
- Meeting this challenge requires an immediate and bold investment by directed, inter-disciplinary teams

Aims: to develop and test innovative farming systems that increase food production & resilience to future perturbations, while reducing the environmental footprint of agriculture

Sustainable Intensification:

- Enhancing beneficial 'services' provided by good soil health, pollination and pest control
- Management of soil & protection of water resources
- Delivered through space-efficient, multi-functional habitats.
- Integration of biodiversity with intensive farming

What the project aims to deliver:

- **Influence** (a major Government research investment)
- Direct and field realistic tests of how valuable these natural processes are though hi-tech monitoring & data analysis.
- Co-development of new management with the farming community
- Understanding of underlying processes
- Demonstration / training / knowledge exchange



Further information

Winter meetings will take place at 10 am, Medhouse Barn, Blackhouse Lane, Petworth, West Sussex, GU28 9NZ on:

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